

Experiential Learning: Research and Best Practice

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11 March 2004

Topics

- What is “pure” experiential learning?
- What is “guided” experiential learning?
- Research comparing pure and guided types
- Using guided experience to design training
- Adopting guided experience to distance courses

What is “pure” experiential learning?

Five parts “Need Authentic Conditions for Correct Direction”

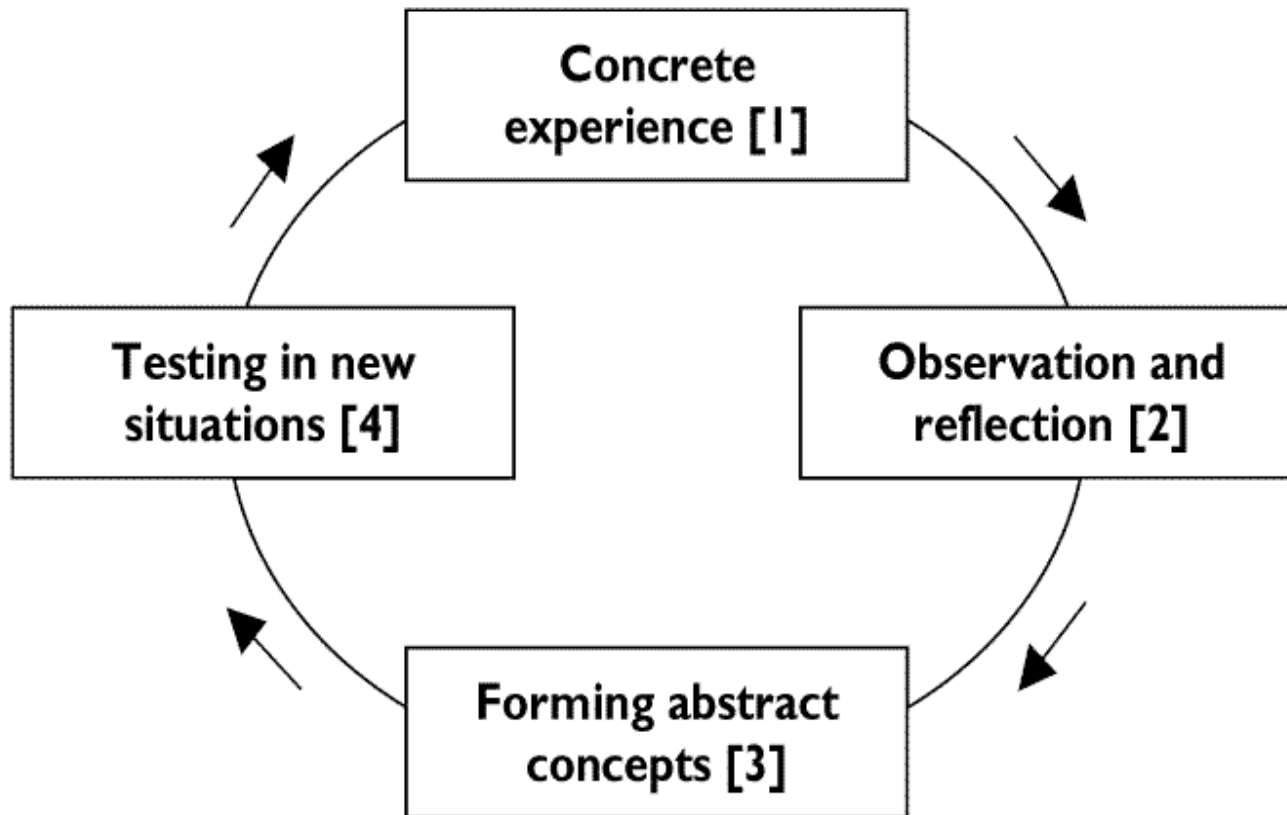
N Negotiated learning goals - must reach agreement

A Authentic field settings - anywhere skills used

C Construction of knowledge – dialogue, trial & error

C Coaches analyze ideas & provide multiple answers

D Debrief – learners discuss and revise approach³



Kolb's View of "Pure" Experiential Learning

Example of pure experiential learning



The best way to learn how to climb a wall

Is to climb a wall with help from your team

Example of pure experiential learning

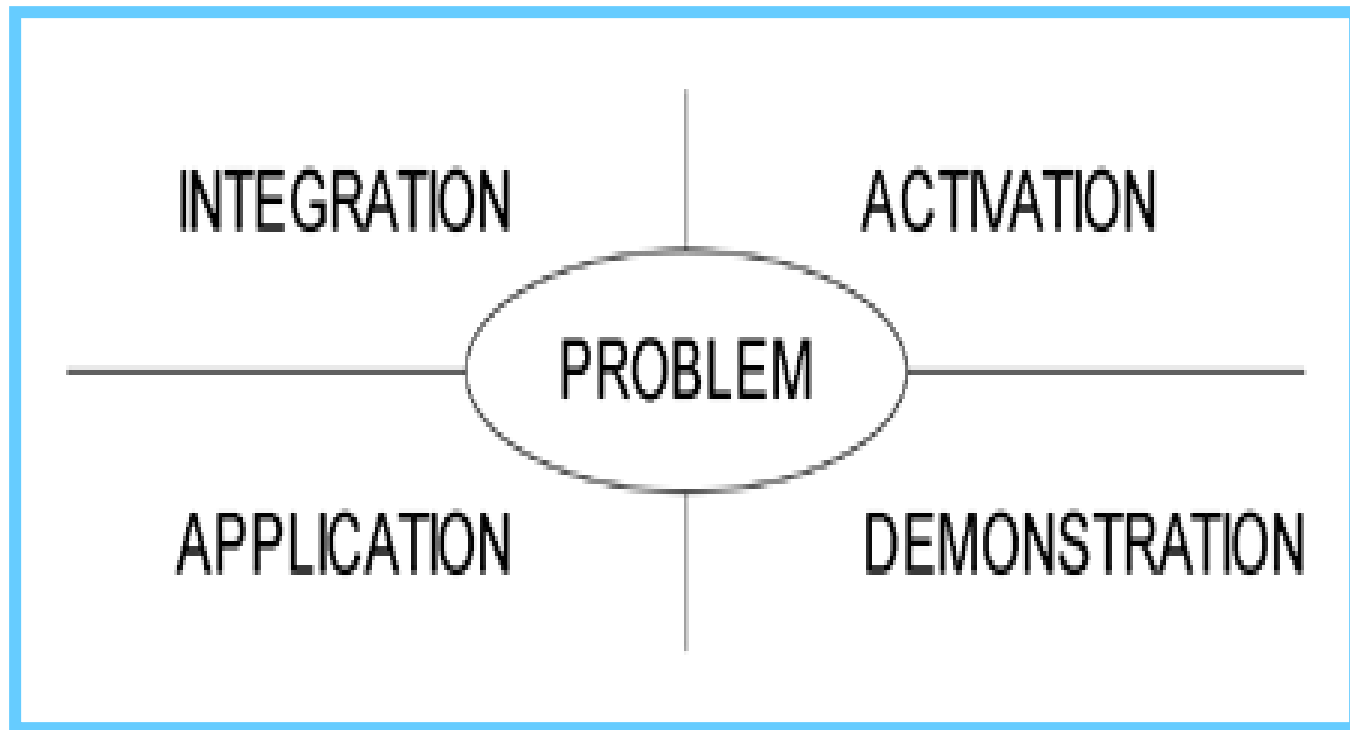


And after you climb the wall, debrief with coach, reflect on what worked best, revise and do a better job next time

What is “Guided” Experiential Learning?

Six parts to “Provide A Demonstration And Improve Talent”

- P** Problem-based – authentic problems in real settings
- A** Activate prior knowledge – use what you know
- D** Demonstrate – Relevant “how to” from task analysis
- A** Application of skills in authentic setting with coach
- I** Integrate all things learned into big practice exercises



Merrill's Model for "Guided" Experiential Learning

Comparing “pure” and “guided” forms

		Pure	Guided
Goals	-	□	□
<u>Negotiation</u>	-	□	O
Authentic Setting	-	□	□
Experience used	-	□	□
<u>Task Analysis</u>	-	O	□
<u>Demonstration</u>	-		O □
<u>Application</u>	-	O	□
Coaching	-	□	□
Debrief	-		□ □
<u>Integration</u>	-	O	□
<u>Transfer</u>	-	O	□

Research On Pure and Guided Learning

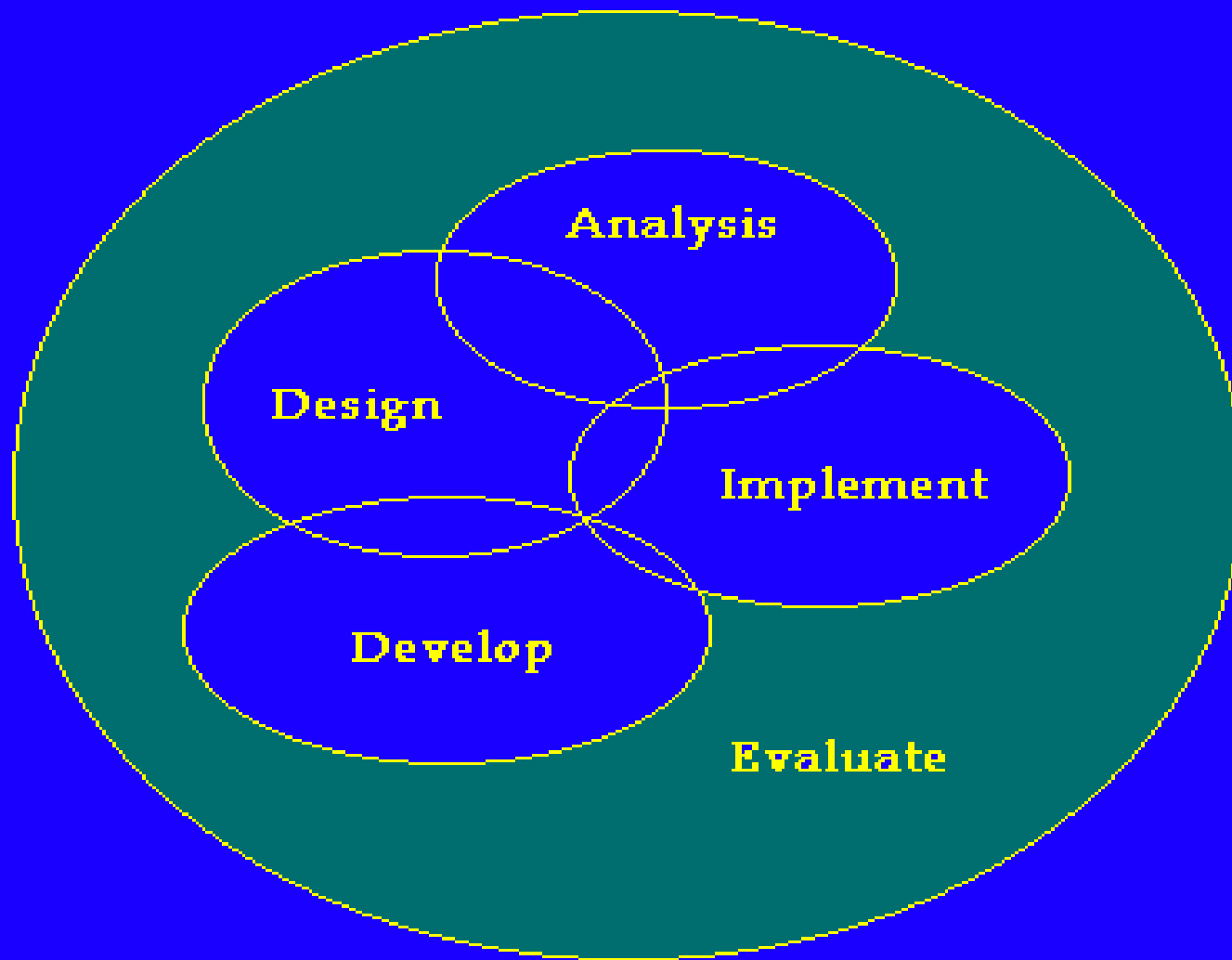
Compared to “guided” learning, the “pure” experiential form:

- Resulted in less learning +/- 50% less for novices
- Worked equally well only for top 10% of experts –
 - Was not more effective for any experience level
- Learning took significantly longer
- Only 10% of top experts learned equally well with both
- More gaps in learning so more mistakes in skill transfer

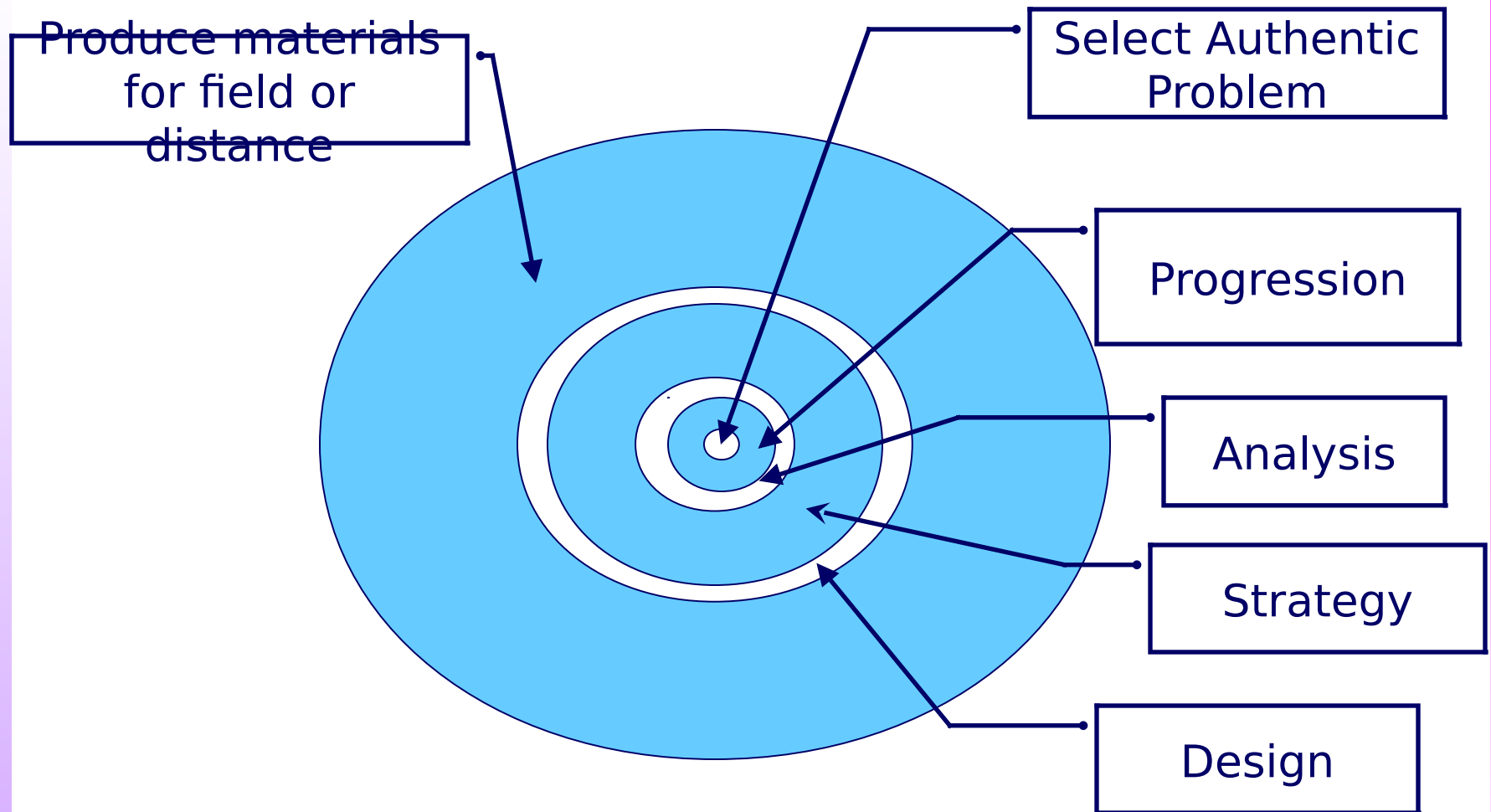
Research on Pure Experiential Learning

Why doesn't pure experiential learning work?

- Negotiating leads to inappropriate learning goals
- People have to invent, perfect and then learn – too much
 - Must depend heavily on coach
- Expert coaches are 50% wrong when they explain “how”
 - Coaches understand task but not how to teach it
- Mental processes can't be observed – causes mistakes
- Develop chunks of knowledge but no cumulative practice
- People support each other even when wrong



Traditional ISD Model



Merrill's Pebble in the Pond Model for Training Development

Using Guided Experience to Design Courses

Problem Selection and Example

- Identify prior experience of trainees
- Identify authentic problem
- Create an example of the problem
 - What are conditions, input and output
- Solve the problem with experts
 - Use cognitive task analysis
 - Solve for prior experience of trainees

Using Guided Experience to Design Courses

Problem Progression

- Identify and solve a set of similar problems
 - Increasingly difficult and complex
 - Two + problems at each difficulty level
- Check problem sequence for scope
 - Do problems cover all needs in field?
- Collect information about
 - New concepts (definition and example)

Using Guided Experience to Design Courses

Analysis of Problem Components

- Sequence groups of problems into lessons
 - First performed in field are first taught
 - If no fixed sequence, easy before difficult
- Develop goals for each lesson
 - Remember definitions of concepts
 - Remember description of processes
 - Practice and do procedure
 - Remember conditions and

Using Guided Experience to Design Courses

Instructional Strategy for Each Lesson

- Goals – Problem Overview
 - You will learn how to ...
- Activation and Reasons
 - Value of learning, consequences of not
 - What you know already – use it
- Demonstration of problem solution
 - Worked example – authentic setting
 - Model should be credible, similar

Using Guided Experience to Design Courses

Instructional Strategy for Each Lesson

- Application: Practice new problem
 - Trainees use worked example or demo
 - Coach gives corrective feedback
 - Practice more complex/difficult problems
 - Gradually fade support – trainee fills in
 - Practice ends when most complex problem solved with no support

Using Guided Experience to Design Courses

Instructional Strategy for Course

- Integration of all problems and information
 - Include previously learned problems as part of new, wider-scope problems
 - Practice of later problems is evaluation of learning earlier problems
- Transfer support
 - Require application ASAP after training

Adopting Guided Experience to Distance Courses

Three Concerns:

1. Must duplicate field conditions and consequences for problems
 - The “IF” in “IF ... THEN” knowledge
 - The “What happens after”
2. Real time observation of practice by Coaches
 - Immediate feedback on complex problems
3. Interdependent teams must practice together

Adopting Guided Experience to Distance Courses

Comparing Merrill to pure experiential learning

Three groups (50 adults in each group) in study of Excel Spreadsheet use:

1. Pure experience, got problems and coach
2. Standard ‘features’ training from Excel
3. Guided Experience – Pebble in the Pond

Adopting Guided Experience to Distance Courses

Merrill's study of pure, guided and standard training to use excel spreadsheets

	Learning Satisfaction	Time	
Pure	34%	60 min+	High
Standard Medium	68%	49 min	
Guided	89%	29 min	High

Summary

Despite more up front effort for “guided” design and delivery:

- Amount learned increases
- Learning time decreases
- Learners like it as well as pure form
- Involves “authentic” settings and tasks

What is not to like?